

Photosynthesis + Cellular Respiration Review

Name _____ Date _____ Per _____

Answer key

Photosynthesis is a process plants do to make their food using energy from the sun
(glucose)

Chemical Formulas

Photosynthesis

Names:

Sun light + Carbon + Water --> Glucose + Oxygen
Dioxide

Symbols:

Light energy + 6CO_2 + $6\text{H}_2\text{O}$ --> $\text{C}_6\text{H}_{12}\text{O}_6$ + 6O_2

Cellular Respiration is a process living things do to break down food and release the energy.

Chemical Formulas

Cellular Respiration

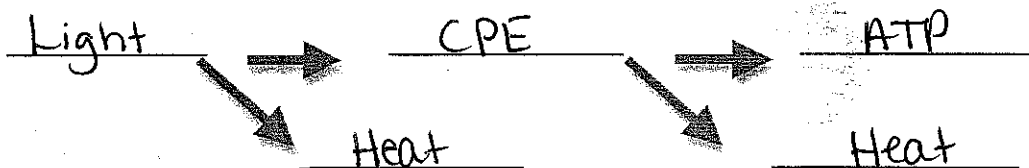
Names:

Glucose + Oxygen --> Water + Carbon + ATP
Dioxide (Energy)

Symbols:

$\text{C}_6\text{H}_{12}\text{O}_6$ + 6O_2 --> $6\text{H}_2\text{O}$ + 6CO_2 + ATP

Energy changes for **Photosynthesis and Cellular Respiration**



What is ATP?

Human or Living Energy



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What is meant by the statement "Cellular Respiration is the opposite of Photosynthesis"?

The ^{from} carbon dioxide and water produced during cellular respiration are the inputs to the process photosynthesis

The part of the plant cell that does photosynthesis is called the chloroplast.

The part of the plant cell that does cellular respiration is called the mitochondria.

The part of the animal cell that does cellular respiration is called the mitochondria.

How do Photosynthesis and Cellular Respiration act as a cycle? What does photosynthesis "give" to cellular respiration? What does cellular respiration "give" to photosynthesis?

Photosynthesis "gives" cellular respiration the glucose and oxygen.

Cellular respiration "gives" photosynthesis the water and carbon dioxide.

Why are photosynthesis and cellular respiration important to your life?

Photosynthesis ① Provides the oxygen we need to breathe
② Provides the food (energy)

Cellular Respiration

① Allows me to release the energy from food so that I can use it

Track the flow of energy from (Sun) Light all the way to you picking up and dropping a glass bottle into a recycle bin. Be sure to include all energy transfers all the way from the sun's energy until the bottle lands in the recycle bin. Think about how the sun's energy gets to you through your diet (complete with fruits and vegetables) and how you would give the energy to the bottle.

